

LWA Basic Specifications

September 4, 2004

Parameter	Design Goal
Frequency Range	10-88 MHz
Maximum Redshift	> 15
Effective Collecting Area	$10^6(15\text{MHz}/\nu)\text{m}^2$
Number of Dipoles	$\sim 13,000$
Number of Stations	~ 52
Configuration	Core: 17 stations within 5 km Intermediate: 17 stations from 5 - 50 km Outliers: 18 stations from 50 - 400 km
Baselines	0.2 - 400 km
Point-Source Sensitivity (2 pol., 1hr, 4 MHz BW)	2.2 mJy @ 15 MHz 1.1 mJy @ 30 MHz 0.7 mJy @ 75 MHz
Greatest Instantaneous Sky Coverage	0.1 sr/beam at 10 MHz
Angular Resolution	10" @ 15 MHz 5" @ 30 MHz 2" @ 75 MHz
Mapping Capability	Full field of view
Number of Independent FOV	2
Maximum Observable Bandwidth	32 MHz
Spectral Resolution	1 kHz
Time Resolution	1 millisecond
Image Dynamic Range	$\geq 10^4$
Polarization	Full Stokes
Digitized Bandwidth	Full RF